WESTON • SPER
100 Atlanta Technology Center, Suite 120, 1575 Northside Drive, NW,
Atlanta, GA 30318 • (404) 352-4147

TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION
EPA CONTRACT 68-01-7367

MEMORANDUM 85189

TO: Carol Walsh
EPA, Region IV

FROM: Brent Jacobs BBJ
TAT, Region IV

THRU: Conley B. Phifer CBP
TATL, Region IV

SUBJECT: Peachtree Industrial Mercury Spill,
Norcross, Gwinnett County, Georgia
TDD #04-8712-24-1428
TAT #04-F-01323

DATE: 8 April 1988

Situation

On 29 December 1987, Technical Assistance Team (TAT) members Virginia Harmon and Brent Jacobs were tasked by EPA OSC Carol Walsh under Technical Direction Document #04-8712-24 to respond to a mercury spill at 6767 Peachtree Industrial Boulevard, Norcross, Gwinnett County, Georgia (Figure 1 - Site Location Maps). The information related by OSC Walsh stated that approximately one pint of mercury was spilled from a dumpster onto an asphalt parking area at this address. Walsh also stated that the Georgia Environmental Protection Division (EPS) and Gwinnett County Hazardous Materials Response Team had responded and were at the site.

Summary

TAT members Harmon and Jacobs arrived at the site at 1635 hours on 29 December 1987 and met with OSC Walsh, Mark Smith of the Georgia EPD, and Lieutenant Puritt of the Gwinnett County Hazardous Materials Response Team. Access to the spill area had been controlled by the Gwinnett County Hazmat team (Figure 2 - Site Diagram).

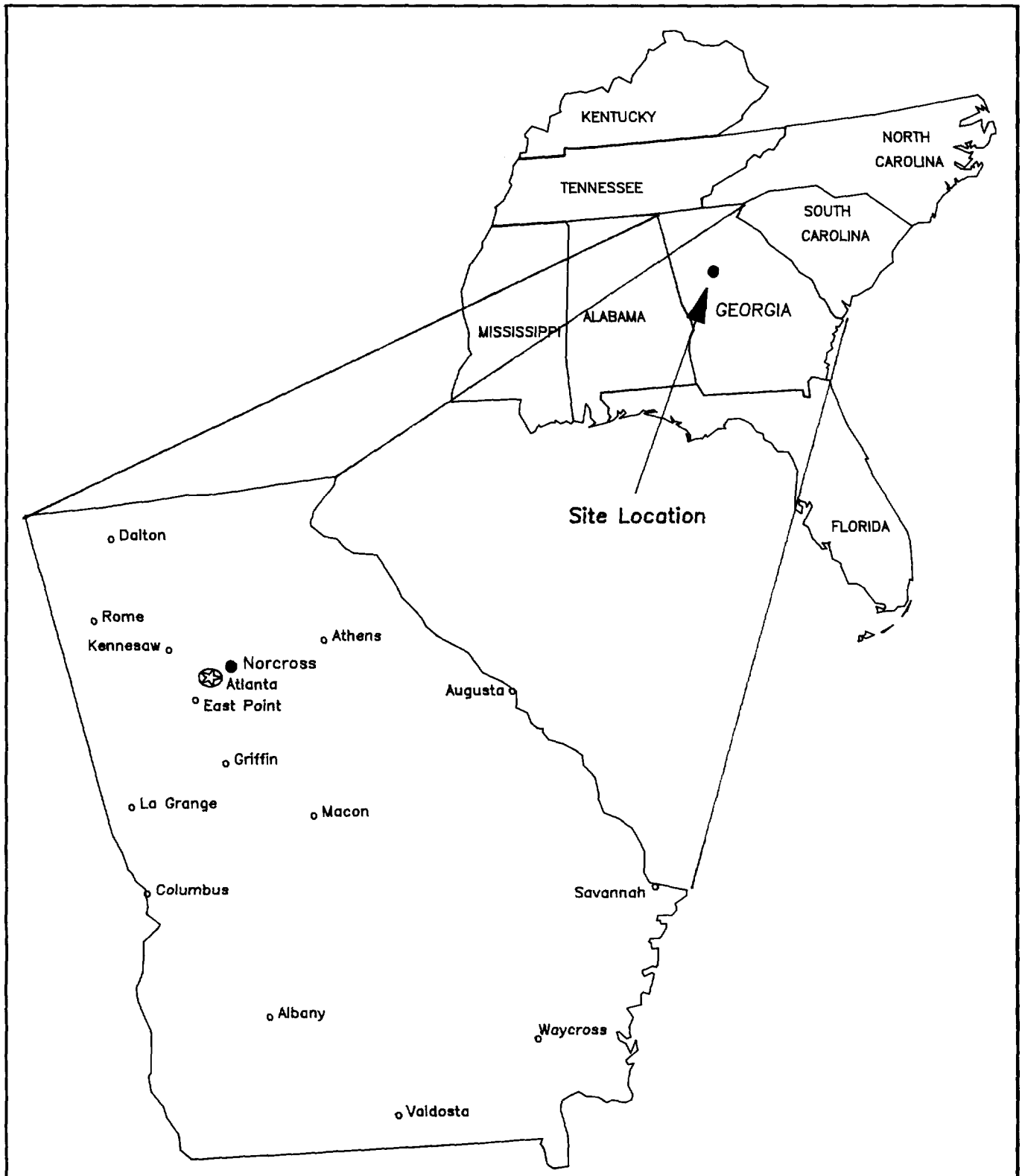
After the initial site investigation OSC Walsh tasked the ERCS contractor at 1645 hours to respond to the spill. The ERCS

contractor arranged for mobilization of a special vacuum unit to the site to collect the mercury from the parking area. At 0115 hours on 30 December 1987 the special mercury vacuum unit arrived on-site and the cleanup began. At 0420 hours the cleanup process was completed and an 8 oz. jar of mercury weighing approximately 12 to 14 pounds had been collected. The parking area was then coated with a sealer to prevent vaporization of any residual mercury. Access to the dumpster that the mercury was suspected of spilling from was controlled until the contents could be inspected and decontaminanted on 30 December 1987.

On 30 December 1987 at 1040 hours ERCS began inspecting and decontaminating the debris in the dumpster. The mercury from the decontamination process was collected in a visqueen lined metal bin. After completing this process, the dumpster and bin was then vacuumed clean of approximately one-fourth pint of mercury. In addition to this mercury, 35 lbs of mercury in plastic coated bottles in the original shipping container was found in the dumpster. Seven full bottles weighing approximately 5 lbs each and three empty bottles were recovered from the dumpster. All pertinent information from the shipping container and bottles was photographed and recorded (Attachment A - Photographs #8, 9, 10 and 11). The shipping container from D. F. Goldsmith Chemical and Metal Corporation located at 909 Pitner Avenue, Evanston, Illinois was addressed to Micromeritics, 1 Micromeritics Drive, Norcross, Georgia 30093. The ten mercury battle labels all had the lot number #112587. The mercury recovered during the cleanup was subsequently sold on 24 February 1988 by ERCS to B. F. Goldsmith in Evanston, Illinois for recycling. Approximately $91.00 was recovered and credited to the EPA by the ERCS contractor.

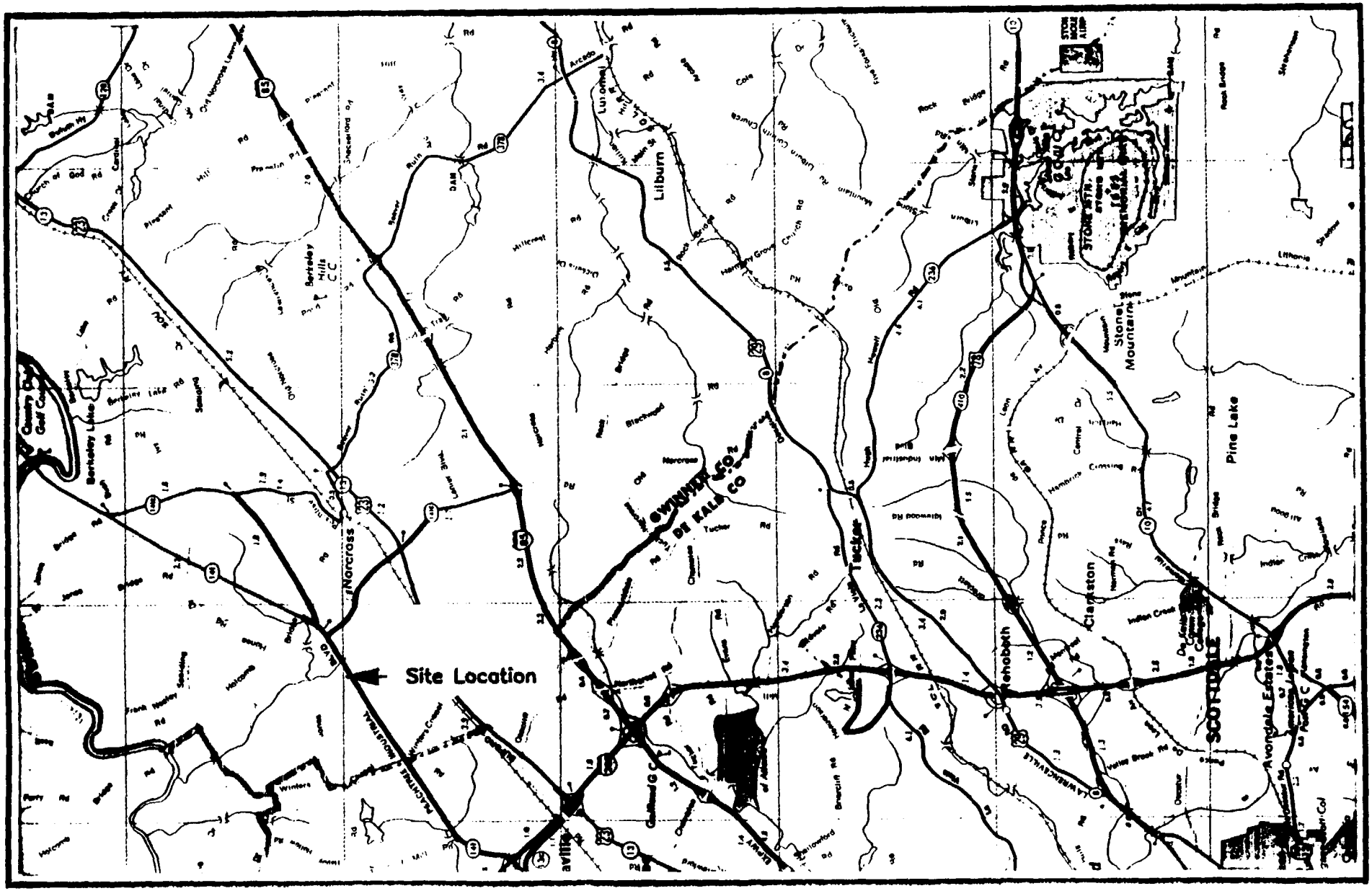
FIGURE 1

Site Location Maps



E.P.A. Region IV
Weston T.A.T. Activity Location
TDD 04-8712-24
Peachtree Industrial Mercury Spill
Norcross, Gwinnett County, Georgia

EPA



WESTON SPER Region IV TAT

SITE: Gwinnett County, Norcross, Ga.

ACTIVITY DESCRIPTION: Site Location

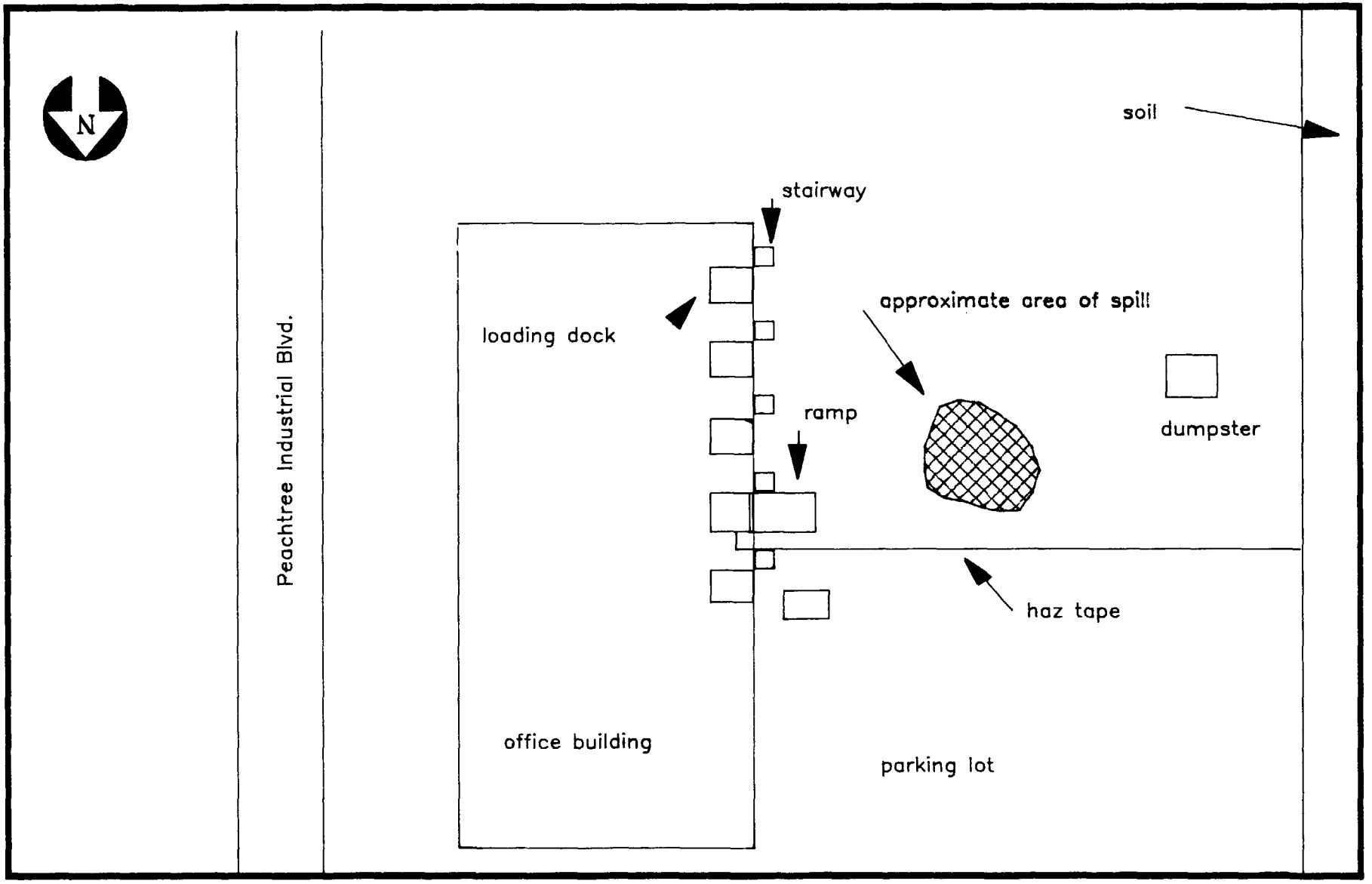
Peachtree Industrial Mercury Spill

TDD NO.: 04-8712-24

DATE: 11 January 1988

FIGURE 2

Site Diagram



WESTON SPER Region IV TAT

SITE: Peachtree Industrial Mercury Spill

ACTIVITY DESCRIPTION: Figure 3– Site Diagram

TDD NO.: 04–8712–24

Norcross, Gwinnett County, Georgia

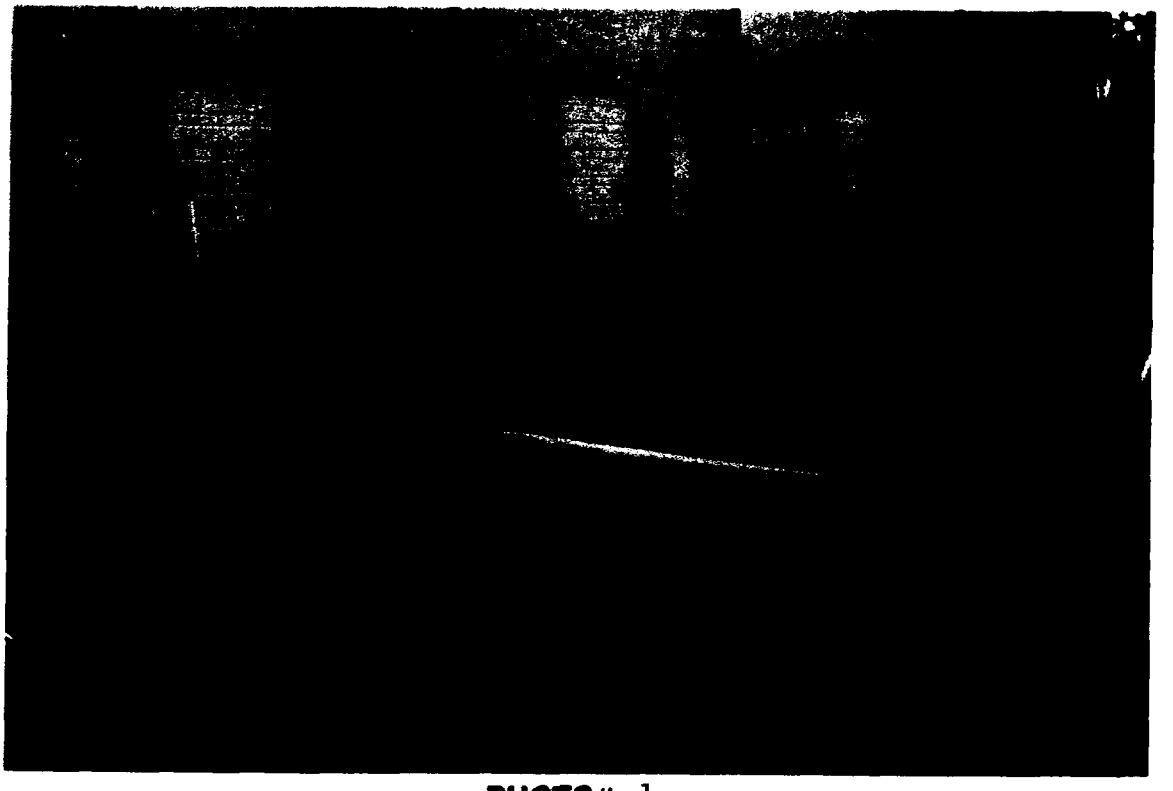
DATE: 30 December 1987

ATTACHMENT A

Photographs

POOR LEGIBILITY

PORTIONS OF THIS DOCUMENT MAY BE UNREADABLE, DUE TO THE QUALITY OF THE ORIGINAL



PHOTO# 1
OFFICIAL PHOTOGRAPH
ENVIRONMENTAL PROTECTION AGENCY

Subject: Mercury spilled on asphalt behind 6767 Peachtree Industrial businesses.

Location: Peachtree Industrial Mercury Spill

Date: 12/29/87 **Time:** 1645

Photographer: Brent B. Jacobs **Witness:** Carol Walsh

Film: Fuji **ASA:** 100 **Location of Negative:** TAT Office

TDD#: 04-8712-24

PHOTO# 2
OFFICIAL PHOTOGRAPH
ENVIRONMENTAL PROTECTION AGENCY

Subject: Mercury in the asphalt parking lot prior to the beginning of the cleanup.

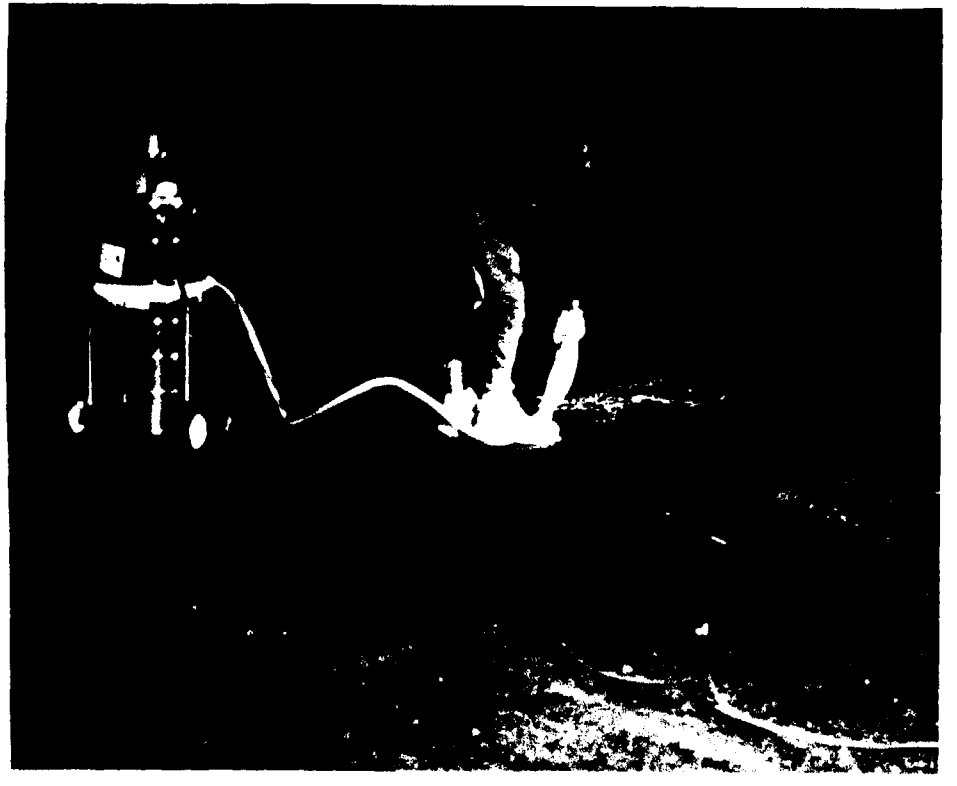
Location: Peachtree Industrial Mercury Spill

Date: 12/30/87 **Time:** 0115

Photographer: Brent B. Jacobs **Witness:** Carol Walsh

Film: Fuji **ASA:** 100 **Location of Negative:** TAT Office

TDD#: 04-8712-24



PHOTO# 3
OFFICIAL PHOTOGRAPH
ENVIRONMENTAL PROTECTION AGENCY

Subject: ERCS technician vacuuming mercury from asphalt parking lot.

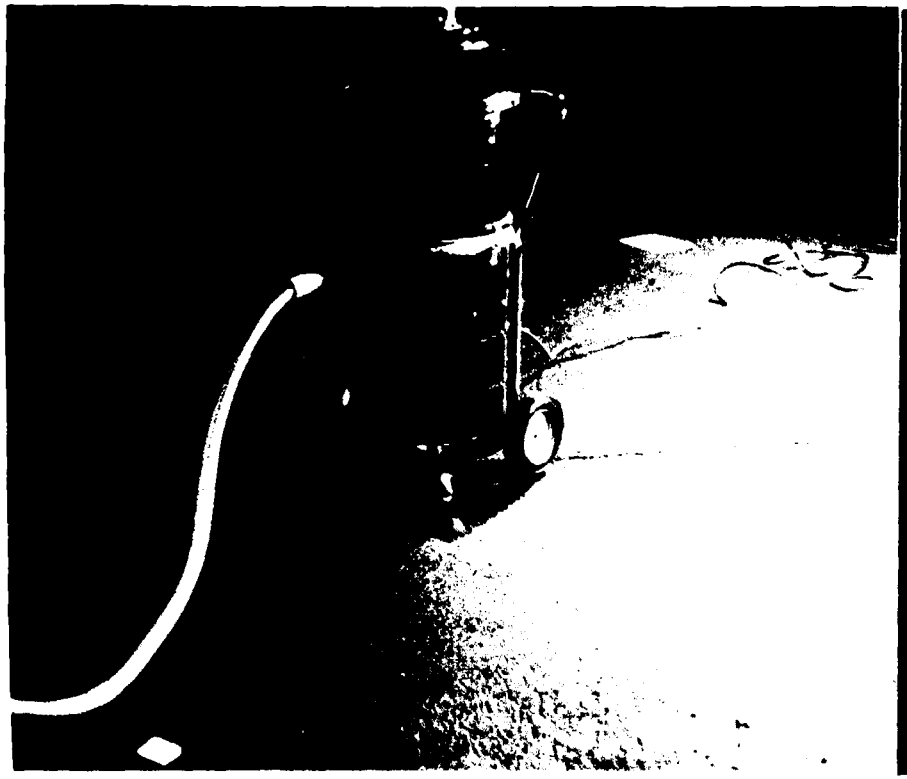
Location: Peachtree Industrial Mercury Spill

Date: 12/30/87 **Time:** 0345

Photographer: Brent B. Jacobs **Witness:** Carol Walsh

Film: Fuji **ASA:** 100 **Location of Negative:** TAT Office

TDD#: 04-8712-24



PHOTO# 4
OFFICIAL PHOTOGRAPH
ENVIRONMENTAL PROTECTION AGENCY

Subject: Mercury collected in container attached to vacuum unit.

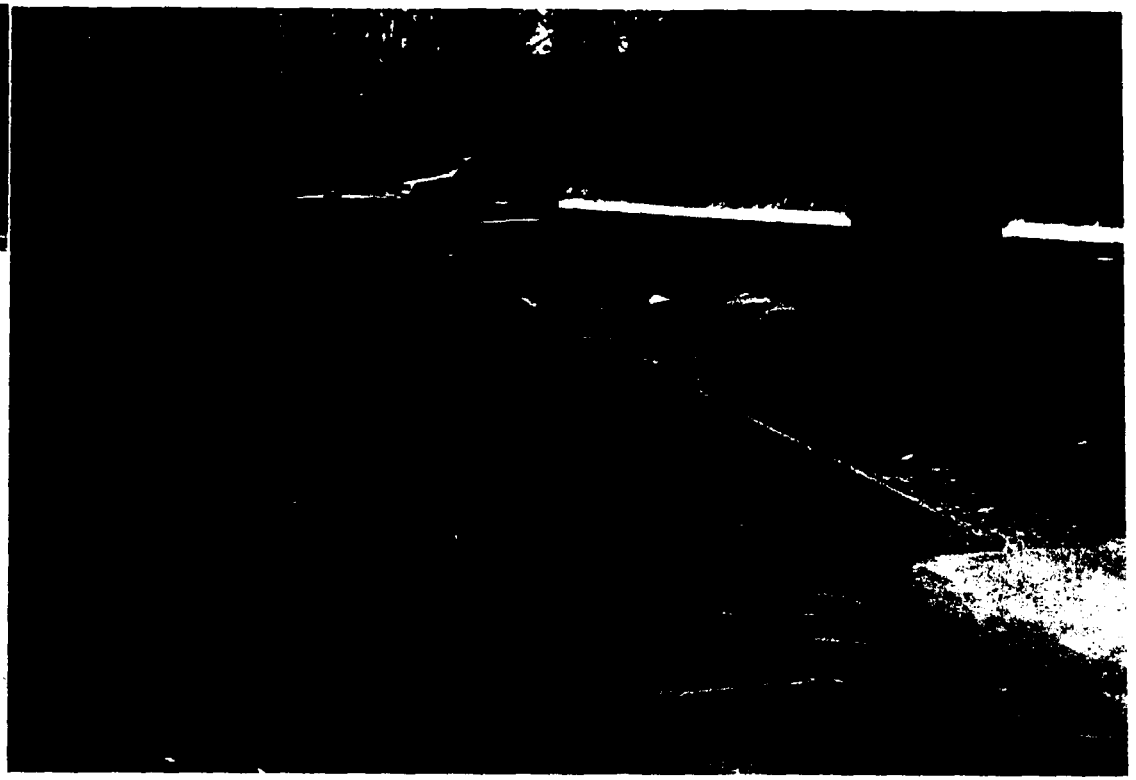
Location: Peachtree Industrial Mercury Spill

Date: 12/30/87 **Time:** 0230

Photographer: Brent B. Jacobs **Witness:** Carol Walsh

Film: Fuji **ASA:** 100 **Location of Negative:** TAT Office

TDD#: 04-8712-24



PHOTO# 5
OFFICIAL PHOTOGRAPH
ENVIRONMENTAL PROTECTION AGENCY

Subject: Asphalt parking lot after removal.

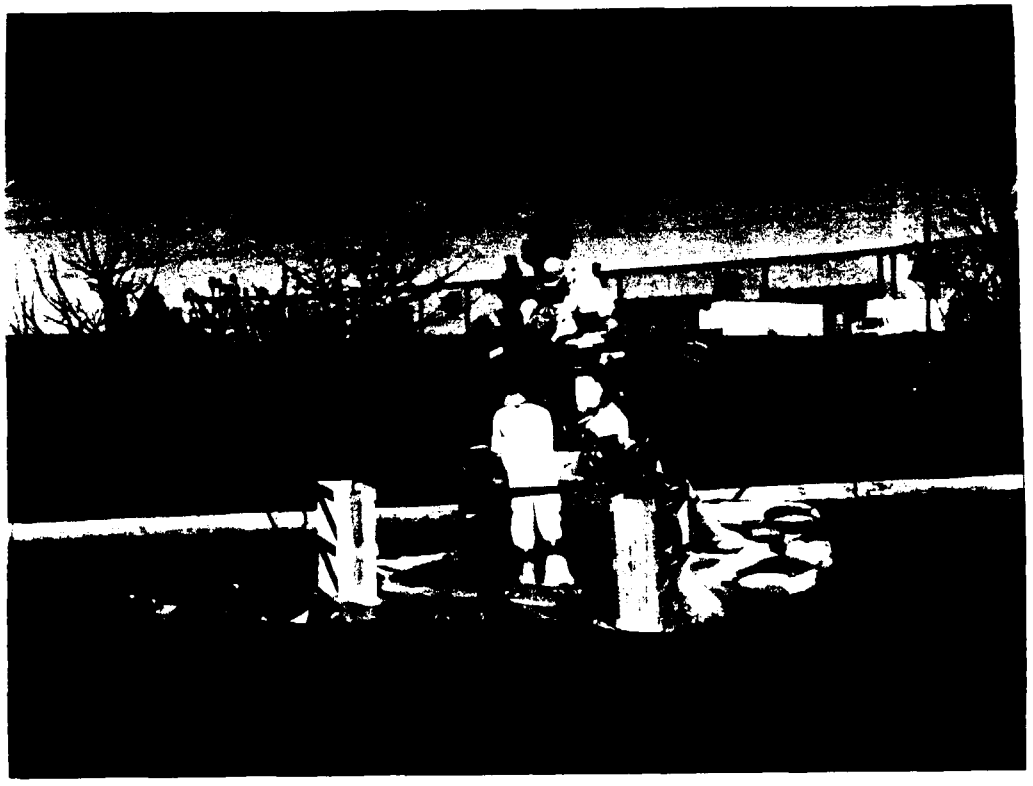
Location: Peachtree Industrial Mercury Spill

Date: 12/30/87 **Time:** 1000

Photographer: Brent B. Jacobs **Witness:** Carol Walsh

Film: Fuji **ASA:** 100 **Location of Negative:** TAT Office

TDD#: 04-8712-24

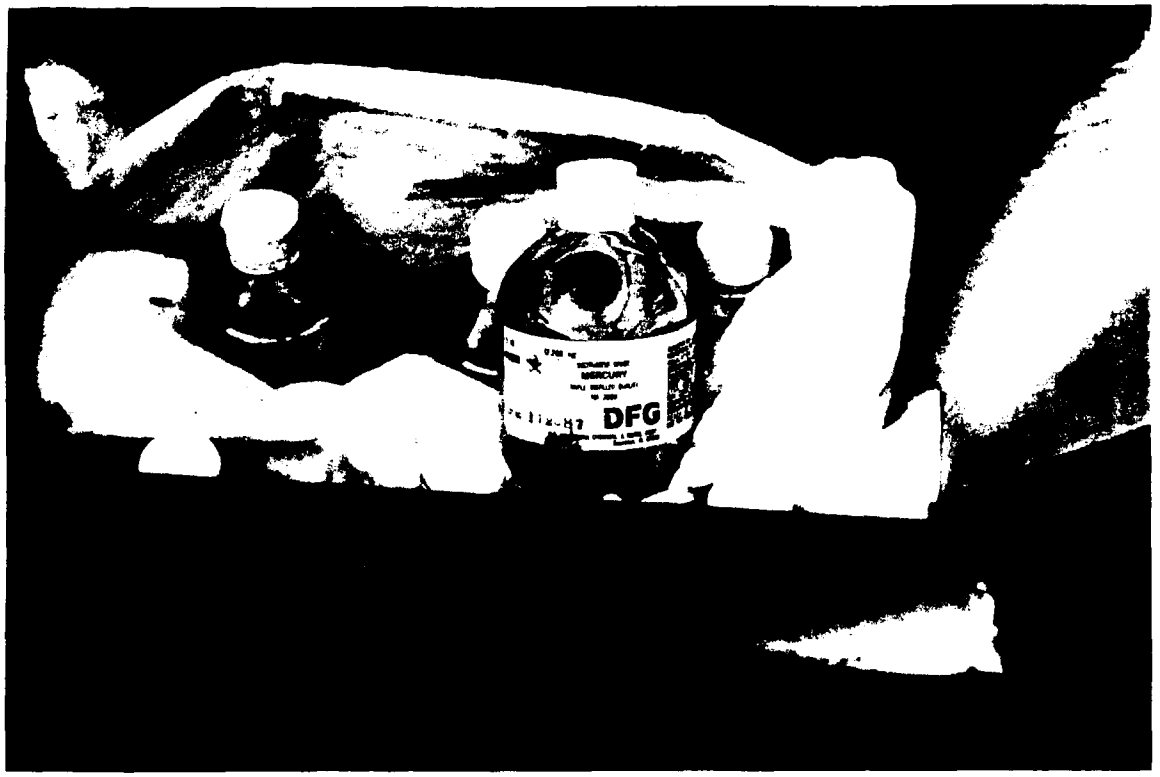


PHOTO# 6
OFFICIAL PHOTOGRAPH
ENVIRONMENTAL PROTECTION AGENCY

Subject: ERCS technicians in level "C" personnel protection gear decontaminating debris in dumpster where mercury was discarded.
Location: Peachtree Industrial Mercury Spill
Date: 12/30/87 **Time:** 1045
Photographer: Brent B. Jacobs **Witness:** Carol Walsh
Film: Fuji **ASA:** 100 **Location of Negative:** TAT Office
TDD#: 04-8712-24

PHOTO# 7
OFFICIAL PHOTOGRAPH
ENVIRONMENTAL PROTECTION AGENCY

Subject: Mercury collected with the vacuum from the dumpster and decontamination process.
Location: Peachtree Industrial Mercury Spill
Date: 12/30/87 **Time:** 1215
Photographer: Brent B. Jacobs **Witness:** Carol Walsh
Film: Fuji **ASA:** 100 **Location of Negative:** TAT Office
TDD#: 04-8712-24



PHOTO# 8
OFFICIAL PHOTOGRAPHY
ENVIRONMENTAL PROTECTION AGENCY

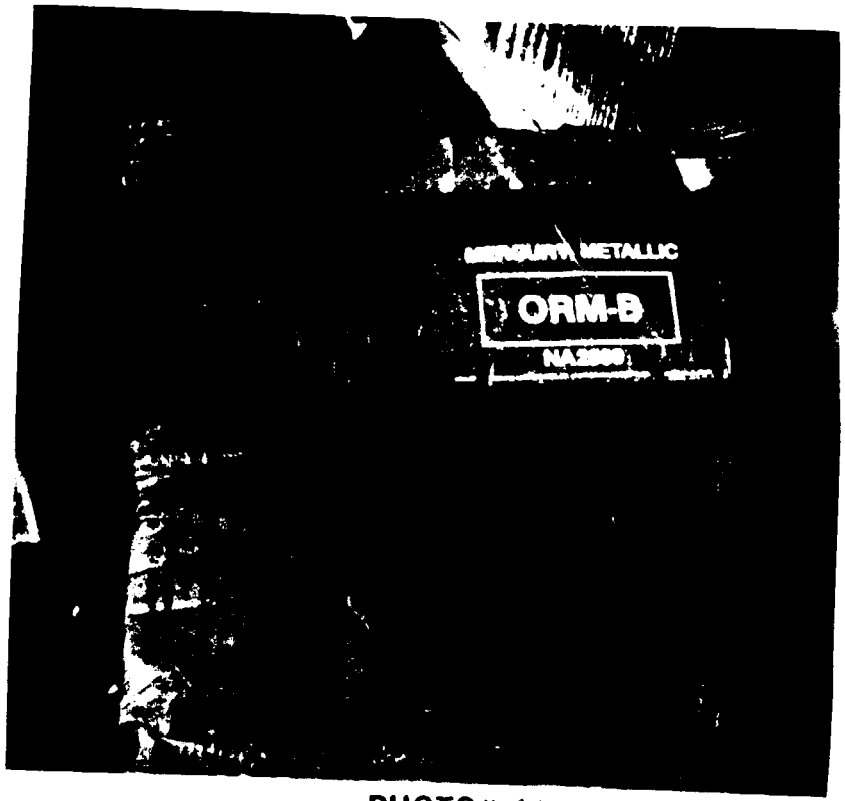
Subject: Seven full bottles of mercury recovered from the dumpster. Lot #112587 is still on the bottles.
Location: Peachtree Industrial Mercury Spill
Date: 12/30/87 **Time:** 1225
Photographer: Brent B. Jacobs **Witness:** Carol Walsh
Film: Fuji **ASA:** 100 **Location of Negative:** TAT Office
TDD#: 04-8712-24

PHOTO# 9
OFFICIAL PHOTOGRAPHY
ENVIRONMENTAL PROTECTION AGENCY

Subject: Three empty bottles recovered from the dumpster. The mercury bottles have the same lot # as the full bottles.
Location: Peachtree Industrial Mercury Spill
Date: 12/30/87 **Time:** 1220
Photographer: Brent B. Jacobs **Witness:** Carol Walsh
Film: Fuji **ASA:** 100 **Location of Negative:** TAT Office
TDD#: 04-8712-24

PHOTO# 10
OFFICIAL PHOTOGRAPH
ENVIRONMENTAL PROTECTION AGENCY

Subject: Shipping box in which the full bottles of mercury were found. Company's address is present on the lid.
Location: Peachtree Industrial Mercury Spill
Date: 12/30/87 **Time:** 1225
Photographer: Brent B. Jacobs **Witness:** Carol Walsh
Film: Fuji **ASA:** 100 **Location of Negative:** TAT Office
TDD#: 04-8712-24



PHOTO# 11
OFFICIAL PHOTOGRAPH
ENVIRONMENTAL PROTECTION AGENCY

Subject: Shipping box with manufacturer and mercury label.
Location: Peachtree Industrial Mercury Spill
Date: 12/30/87 **Time:** 1225
Photographer: Brent B. Jacobs **Witness:** Carol Walsh
Film: Fuji **ASA:** 100 **Location of Negative:** TAT Office
TDD#: 04-8712-24

ATTACHMENT B

Log Notes

December 28 1987 Tuesday

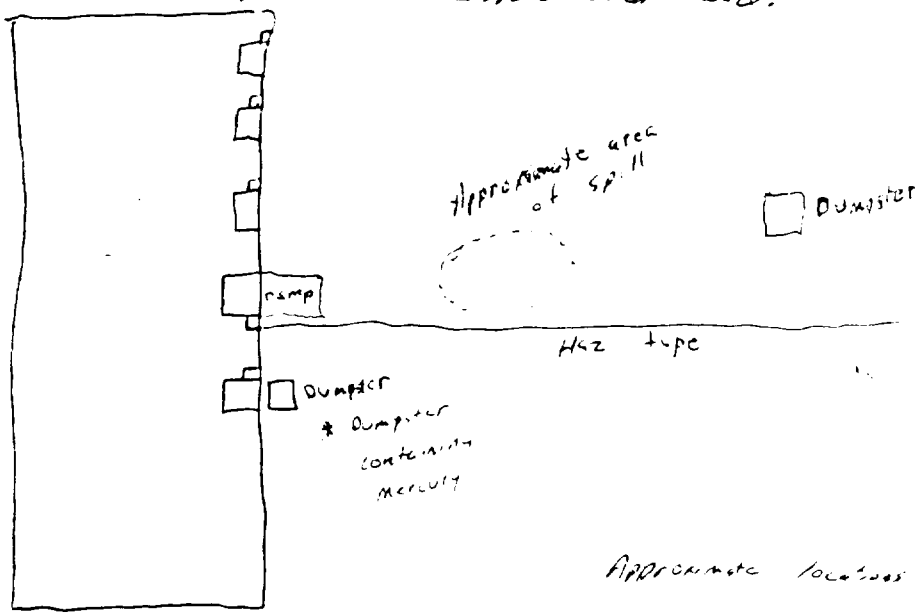
1520 TAT Jacobs received emergency response call to respond to a spill of mercury

1550 TAT Jacobi and Harmon departed office to 6777 Peachtree Ind Road in Gwinnett County

1635 TATs arrive on site and meet Carol Walsh OSC and Mark Smith EPD. Gwinnett FD on scene.

1645 OSC Walsh talked to several businesses at the location and they stated they did not use mercury. OSC stated she was going to call OH Materials (ERCS) to clean up the mercury.

1650 TAT observed spill from perimeter. The mercury is in the back parking lot of 6767 Peachtree Industrial Blvd.



1655 Kelly Wilkinson with Gwinnett Daily News at site

1725 Mark Smith with EPD off-site

1800 TATs off site for dinner.

1810 OSC off site for dinner. Gwinnett

Fire Department remains on-site. OH Materials due on site at 2300 hours. Vacuum pump due at site at 2300 hours also. It is being flown in from Detriot.

1900 TAT's and OSC on site

1930 OSC recieved phone in Gwinnett County's Haz Mat response truck from OH Materials. OH stated equipment being flown in on airplane from Detriot and should be on site at 2400 hours. OSC Welsh requested TATs to depart site and one (TAT Tacoby) return to site at 2400 hours to monitor ERCS cleanup. TATs and OSC depart site.

Brent B. Jacobs

December 30 1987 Wednesday

0000 TAT Jacobs on site. OH Materials [illegible] on site. Gwinnett Haz Mat team [illegible] on site

0015 OSC on site

0020 Cliff with OH Materials on site

0115 OH tech (2) arrive on site with equipment

0120 OH crew setting up vacuum pump

0130 ERCS started vacuuming up mercury

0150 Bucky Thompson (OHM) arrived on site

0230 OSC Walsh provided TAT with a list of the companys at the [illegible]. The list was provided by the Gwinnett Fire Department Haz Mat Team. The Haz Mat data sheets on the companys [illegible] Jennifiers Glass Works and Beveled [illegible] used mercury. Two former tenants also used mercury (Lab Trends and Chemy Products according to haz Mat data sheets.

0330 Bucky and Cliff off site

0340 Dumpster suspected to have mercury container was taped with hazard tape and ERCS checks the dumpster on 12/30/87 at 1000 hours

0400 OSC Walsh off-site

0410 OH techs completed vacuuming spill area. HTY sealer being sprayed on spill area surface to hold down fumes from any mercury possibly left behind

0420 Mercury collected from spill area placed in zip lock baggie and placed inside [illegible] sample jar.

0440 TAT and ERCS off site. Gwinnett Fire Department remain on site

0930 TAT arrived on site. Fire Department on site.

1015 OH Materials arrived on site. Four techs present. Crew spreading visqueen and [illegible] around the dumpster before cleaning debris. Mercury will be [illegible] in metal bin and transferred to proper container. Temperature outside is 70°.

1040 ERCS crew began sifting through dumpster starting at the top. Garbage is knocked off into the visqueen lined bin and then bagged. ERCS crew in level C.

1045 Cliff with CH Materials on site

1050 ERCS crew found box that is suspected to contain mercury. Approximately 50 lbs found in plastic bottles (5 lbs each). Label on box says Micromeritics, 1 Micromeritics Dr. Norcross Ga, PO 661919.

1115 Lot # on individual bottles is #112597. All bottles have same lot number. 4 unbroken bottles and one broken bottle found.

1140 A total of seven full 5 lb bottles and three broken bottles were recovered. CH tech stated approximately 1 tablespoon of mercury in bottom of dumpster.

1150 OH crew preparing to vacuum dumpster and the bin

1210 Vacuuming of dumpster completed. Two sample jars of material collected from dumpster and bin. Visqueen and Tyvek collected and bagged by OH. OH kept mercury and [illegible] [illegible] for disposal at a later date.

1215 TAT Jacobs talked to OSC Welsh at [illegible]

about disposal of garbage from dumpster
Walsh stated once mercury removed and
dumpster cleaned to put decontaminated
back in dumpster.

1225 all crew completed work at site. Gwinnett
County Fire Department off site.

1230 TAT and ERCS off site. TAT returning to
Atlanta office

1330 TAT arrived at office.

Summary

Seven full bottles (2.268 kg each) of mercury
by D. F. Goldsmith + Metal corporation lot
112587 and three empty bottles of the
same lot # 112587 were found in the dumpster.
Address of Goldsmith is D.F. Goldsmith
Chemical + Metal Corp. 909 Pitner Avenue,
Evenston, Illinois 60202. The box the
mercury bottles were found in was addressed
to Micromeritics, 1 Micromeritics Dr.
Norcross, Ga. 30093 PO 061913
ERCS cleaned all debris from the dumpster
and collected in the bin then vacuumed
both clean. Mercury collected from this process
stored in sample bottles until disposal agreem

Brent B. Reed 12/30/87

ATTACHMENT C

Table of Witnesses

Carol Walsh, OSC
U. S. Environmental Protection Agency
Emergency Response Branch, Region IV
345 Courtland Street
Atlanta, Georgia 30365
404/347-3931

Brent B. Jacobs, TAT
Virginia Harmon, TAT
Roy F. Weston, Inc./SPER Division
100 Atlanta Technology Center, Suite 120
1575 Northside Drive
Atlanta, Georgia 30318
404.352-4147

William Yeckes
Randy Bennett
Tim Bond
Mark McClendon
A. T. Fedrick
Bucky Thompson
Mike Feagles
O. H. Materials
1000 Holcomb Woods Pkwy, Suite 120
Roswell, Georgia 30076
404/641-1066

Joe Puritt
Philip Wood
Mike Etheridge
Joe Parks
Frank Daniel
Dwayne Morris
Ron Williams
Gwinnett County Hazardous Materials Response Team
6160 Crescent Drive
Norcross, Georgia 30071
404/448-9277

ATTACHMENT D

Site Safety Plan

WESTON SPER DIVISION
HAZARDOUS WASTE SITE INVESTIGATION AND EMERGENCY RESPONSE
HEALTH AND SAFETY PLAN

U.S. EPA CONTACT: Carol Walsh
Date of Inspection: 29 Dec 87 Time: 1545 TDD No. 87122-4
Original Safety Plan: Yes x No ___ PCS No. 1728
Admendment/Modification No. ___

SITE SAFETY COORDINATOR: Brent Jacobs

Site Name: Gwinnett County Mercury Spill

Site Address: Street No. 6767 Peachtree Industrial Blvd
City Norcross
County Gwinnett
State Georgia Zip Code 30092

Site Contact: ___ Phone ___

Directions to Site: (Attach Map) Take I-85 N to 285 W. Exit Peachtree Industrial Blvd. Take a right, go about 4 mi. Site is on the left

SITE HISTORY: mercury spilled in parking lot area behind building

INCIDENT DESCRIPTION

TYPE: A) Spill x Air Release ___ Fire ___ HW Site ___ Other ___
B) Assessment ___ Sampling ___ Emergency Response ___
Clean-up/Removal ___ Other (specify) ___
C) Urban/Residential ___ Commercial x Industrial ___
Rural ___ Remote ___

PERSONNEL PHYSICAL SAFETY HAZARDS:

Heat ___ Cold x Noise ___ Underground Utilities ___
Overhead Utilities ___ Heavy Equipment ___ Slip, Trip, Fall x
Confined Spaces ___ Pressurized Airlires ___ Explosive ___
Ladders ___ Scaffolds ___ Unguarded Openings-Wall, Floor ___
Liquids in Open Containers, Ponds/Lagoons x
Other ___

CHEMICAL CONTAMINANTS OF CONCERN

CONTAMINANT	TLV PEL	IDLH	PHYSICAL CHARACTERISTICS	ROUTE OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE	FIRST AID	INSTRUMENTS TO DETECT
Mercury Cont. Soil Dust Hazard	.05 mg/m³	28mg/m³	Silvery Metalic liquid	Inh/Abs/Con	Cough, Dysp, Bron Pneu, Tremor, IRR. Insec. Headache FAT. Weak	IRR with Soap/water	NA – Thermal Desorp.

Description of Decontamination To Be Used: _____

TASK TO BE PERFORMED	ANTIC. LEVEL OF PROTECT.	COVERALL	GLOVE IN/OUT.	SPECIFY FIR TYPE AIR PURIF. RESPIRATOR CART./CANN.
ERCS monitoring from Agency	D			

Anticipated Monitoring

Radiation Meter [ ] CGI [ ] HNU [ ] _____eV Probe OVA [ ]

Detector Tube [ ] _____ Other _____

EMERGENCY PHONE NUMBERS:	LOCATION	PHONE	NOTIFIED
FIRE	Gwinnett County 6160 Crescent Dr	448-7277	Y
POLICE	Gwinnett County	962-1900	N
AMBULANCE		963 0123	N
HOSPITAL	Northside 1000 Johnson Ferry Rd	851-8000	N

CHEMICAL TRAUMA CAPABILITY? Y

DIRECTIONS TO HOSPITAL: (ATTACH MAP) RTE. VERIFIED BY_____ DATE_____

Take right on Peachtree Industrial Blvd (South) to I-285. Take I-285 west to Peachtree Dunwoody (exit 20). Go south on Peachtree Dunwoody 2 miles to Johnson Ferry Rd. Hospital is ½ mile on right.

ADDITIONAL EMERGENCY PHONE CONTACTS:

CHEMTREC	(800) 424-9300
TSCA HOTLINE	(800) 424-9065, (202) 544-1404
ATSDR	(DAY) (404) 329-2888
	(NIGHT) (404) 566-7777
AT & F (EXPLOSIVES INFO.)	(800) 424-9555
NATIONAL RESPONSE CENTER	(800) 424-8802
WESTON MEDICAL EMERGENCY SERVICE	(513) 421-3063
WESTON 24 HOUR HOTLINE	(215) 524-1925, 1926
PESTICIDE INFORMATION SERVICE	(800) 845-7633
EPA ERT EMERGENCY	(201) 321-6660
RCRA HOTLINE	(800) 424-9346
CMA CHEMICAL REFERRAL CENTER	(800) 262-8200
NATIONAL POISON CONTROL CENTER	(800) 942-5969
U.S. DOT	(202) 366-0656 (Day only)

Prepared by: B. Jacobs Date: 12/29/87

Pre-Response Approval by: PPD Date: 12/29/87

TDD# 871224 PCS# 1428

OBSERVED CONDITIONS/ACTIVITIES

Describe Initial Conditions (Source/Type/Quantity): estimated less than ½ pint of liquid mercury was dispersed on the asphalt pavement of a parking lot.

DOCUMENTATION

PERFORMED BY: Brent Jacobs

Type: Photo X Log Book X Recorder ____ Video ____

PHYSICAL DESCRIPTION

Size of Site: ¼ acre Topography Terrain: flat Weather Clear, ~40°C, winds ≤ 10 MPH

Distance to Nearest: Residence 1 MI School N/A Hospital 6 MILES

Public Building adjacent Other ____

Evacuation: Yes ____ No X Number — By Whom ____

Nearest Waterway: N/A Distance: ____

Condition	Observed	Potential	None
Surface Water Contamination			✓
Ground Water Contamination			✓
Drinking Water Contamination			✓
Air Contamination		✓	
Soil Contamination			✓
Stressed Vegetation			✓
Dead Fish, Other Animals			✓

ACTIONS TAKEN ON SITE: (Attach Map of Site Control Zones)

Was Entry Made by TAT: YES ____ NO ✓

TASK CONDUCTED: Describe Specific PPE Used and Why

monitor ERCS cleanup

AIR MONITORING LOG

OVA Calibration _____
HNU Calibration _____
OGI Calibration _____

Background O_2 _____
Organics _____
Radiation _____

(ATTACH CALIBRATION DATA TO LOG)

OGI _____

S I T E N A M E

STATION/ LOCATION	DATE	TIME	NAME OF AIR MONITOR	TYPE OF EQUIPMENT (HNU(PROBE/SPAN), OGI, OVA, RAD MTR	READING	SUMMARY/COMMENTS

SAMPLING: CONDUCTED? YES_____ NO X

If Yes, Describe Sampling Method_____

Has Lab Been Notified of Potential Hazard Level? Yes___ No___ NA X

Note: This Health and Safety Plan was prepared for work to be conducted under the Technical Assistance Team (TAT) Contract 68-01-7367 Zone 1. Use of this plan by WESTON and its subcontractors on the TAT contract is intended to fulfill the OSHA requirements found in 29 CFR 1910.120. Items not specifically covered in this plan are included by reference to 29 CFR 1910 and 1926.

I have read and understand this safety plan.

NAME (PRINTED)	SIGNATURE	AFFILIATION	DATE
Virginia Harmon	Virginia Harmon	Weston-TAT	
[illegible]	[illegible]	[illegible]	

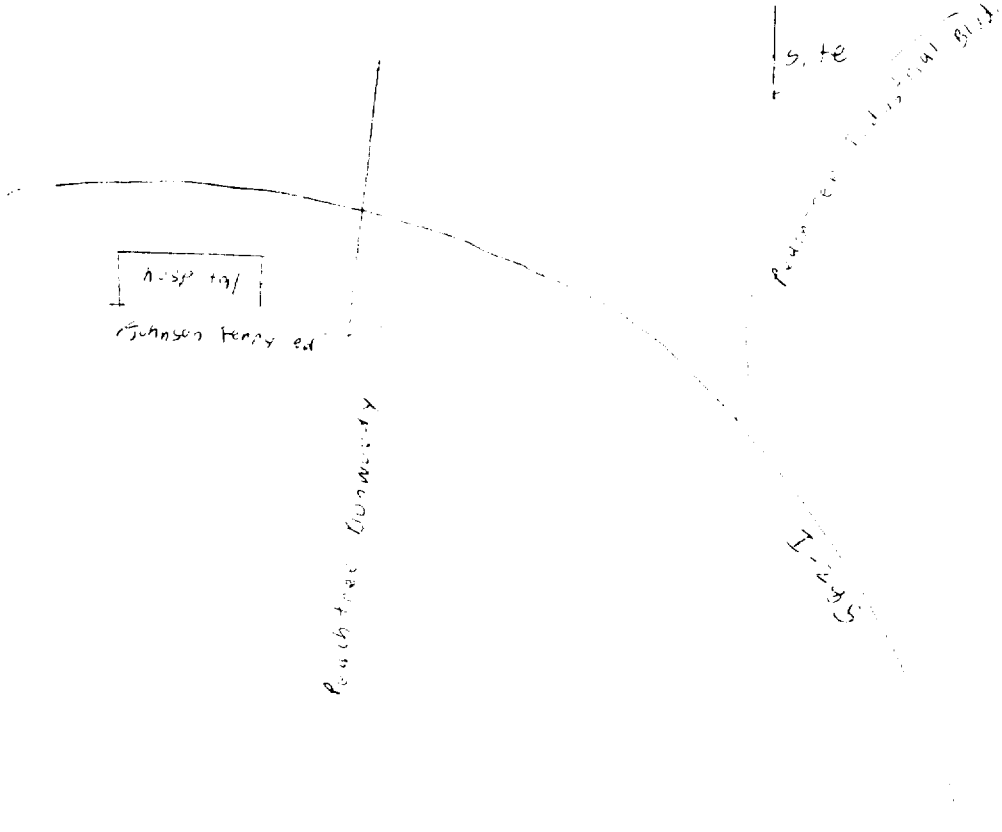
Final Submission of Plan by Virginia Harmon Date 1-4-1988

Post Response Approval David Ray Daniel Date 01/04/88

Copy to ZPMO_____ Date_____

SPER HSO Reviewed by:_____ Date:_____
Followup Required: Yes___ No___
Followup Performed: Date:_____ With:_____
Comments:_____

Hospital Map Directions



scu-rbt LDL_0: 10 mg/kg; ivn-rbt LDL_0: 2 mg/kg

Symptoms: Severe corrosion of mucous membranes, nausea and vomiting, spitting of blood, abdominal pain, diarrhea, kidney disorder, and exhaustion. Continual drinking of contaminated potable water may cause reduction of activity of alkali phosphatase in neurocytes.

Handling & Storage: Keep containers tightly closed, and store in a well-ventilated place. Polyethylene containers are suitable for small quantities.

Explosion possibilities on contact with hazardous materials:

Phosphorus, antimony, aresenic, and silver salts - by heat or impact; alkali metals, alkali sulfides, acetylene, and ammonia by impact; oxalic acid, metal oxalates, metal sulfites, metal phosphates by friction or impact.

Emergency Treatment and Measures:

A) Hygienic Precautions: All workers must be familiarized with proper procedures for handling mercury compounds. Examine the atmosphere intermittently. Physical examinations and urinary mercury determination, at intervals determined by the degree of exposure. Preclude from exposure those individuals with diseases of liver, kidneys, lungs, and central nervous system. No eating or smoking in work area.

B) Hygienic Treatments (First Aid): If swallowed, wash stomach first with 5% formaldehyde sodium sulfoxylate solution, then with 2% sodium carbonate solution, followed by ingestion of 250 cc of formaldehyde–sodium sulfoxylate solution. Administer dimercaprol at a dose of 4mg/kg of body weight (not to exceed 300 mg) every four hours the first day, every six hours the second day, and then every eight hours for one week. Check reduction of renal function causing accumulation of mercury. Penicillamine is reported effective. Watch electrolyte balance carefully.

Disposal and Waste Treatment Dissolve in water after converting soluble nitrate if the compound is not water-soluble. Adjust the pH and precipitate mercury as mercury sulfide. Wash and dry the precipitate and return to the suppliers.

390 Mercury Hg

Synonym: Quicksilver

Uses: Manufacture of all mercury salts; mercury cells, electric switches, propellant, mercury vapor lamps, barometers, thermometers, medicine, amalgams, mercury boilers.

Properties: Mol wt 200.59; sp gr 13.59 (20/4); mp -38.88°C; vapor pressure 0.000185 mmHg (0), 0.001201 (20), 0.006079 (40), 0.02524 (60); bp 356.7°C. Silvery, extremely heavy liquid; insol in hydrochloric acid; sol in sulfuric acid upon boiling; readily sol in nitric acid; insol in water, alcohol, ether.

Hazardous Potentials:

A) Flammability: Fulminate or mercury-ammonia compounds are highly explosive and precautions should be taken accordingly against combinations of mercury, nitric acid and ethanol.

B) Toxicity: TLV: 0.1 mg m^3

TDL: ihl-hmn TCL_0:169 ug/m^3 40Y TFX:CNS

ipr-rat TDL_0:400 mg/kg/14DI TFX:NEO

Symptoms:

Acute:

Swallowing: burning in mouth and throat; thirst, shock, cardiac arrhythmias (disturbance of rythem), nausea, vomiting, abdominal pain, bloody diarrhea, oliguria, hematuria, albuminuria, casts

Inhalation: Inflammation of the mouth, salivation, metallic taste, abdominal cramps and diarrhea; difficult breathing, cough, fever, restlessness, bronchitis and inflammation of the lungs.

Chronic:

Central nervous system: headache, dizziness, constriction of blood vessel disturgance, restlessness and irritability, sleeplessness, peripheral inflammation of the nerve, diffective control of muscles, increase in deep-tendon reflexes; tremors, static, intention, gross.

Gastrointestinal: increased salivation; stomatitis, inflammation of the gums, with blue line; lack of appetite, nausea, vomiting, diarrhea, occasionally damage to liver.

Genitourinary: proteinuria, hematuria, anuria.

Respiratory: Inflammation of the nose, loss of sense of smell, cough, fever.

Eye: mercurialentis--deposit of mercury on anterior and posterior surfaces of lens; construction of visual fields; color scotomata (blind spot).

Skin: erythematous papular and vesicular lesions.

Handling & Storage: Keep containers closed. (small quantities are preferably stored in polyethylene bottle.) Cover the surface with water as much as possible to protect evaporation. Maintain good ventilation. Close attention should be paid to maintenance and cleaning of apparatus.

Hazardous reactions with:

nitrates and chlorates heating sparks or ignition

Wear rubber gloves, self-contained breathing apparatus

Emergency Treatment and Measures:

A) Hygienic Precautions: Adequate ventilation. Housekeeping in plant must be meticulous and all spills must be cleaned up promptly. Air must be sampled frequently.

No eating or smoking in work areas. Protective clothing with special lockers and bathing facilities. Physical examinations of exposed personnel at intervals determined by the degree of exposure, including determinations of mercury in urine as well as neurologic evaluations. Preclude from exposure those individuals with diseases of liver, kidneys, lungs and nerves.

B) Hygienic Treatments (First Aid): Gastric lavage, if swallowed, with 5% solution of sodium formaldehyde sulfoxylate, then with 2% solution of sodium bicarbonate, finally leaving 250 cc of sodium formaldehyde sulfoxylate in the stomach; starch-retention enemas for diarrhea; Antidote for poisoning by arsenic and heavy metals (dimercaprol) 4 mg/kg of body weight (but not exceed 300 mg in a single dose) every 4 hours the first day, every 6 hours the second day; guard against accumulation in patients with reduced kidney function. Electrolyte balance must be watched carefully.

Spills and Leakage or Disposal and Waste Treatment: Collect and store immediately by using of suction pump and aspirator bottle with long capillary tube. For the fine drop of mercury in unaccessible site (crack, etc.), treat with calcium polysulfide and excess sulfur. Keep all spilled or disposed mercury in a tightly stoppered bottle for sale or purification.

391 Mercury fulminate $Hg(CNO)_2$

Synonym: Mercuric cyanate.

Uses: Percussion cap, explosive.

Properties: Mol wt 284.65; sp gr 4.42; mp explodes. Gray crystalline powder; sol in alcohol, ammonium hydroxide and warm water; sparingly sol in cold water.

Hazardous Potentials:

A) Flammability: Explodes when dried.

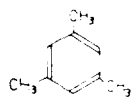
B) Toxity: Highly toxic.

Handling & Storage: Keep moist till used.

Wear rubber gloves, self-contained breathing apparatus and coveralls. Do not contaminate air and water with this chemical.

Spills and Leakage or Disposal and Waste Treatment: Dissolve in water after converting soluble nitrate if the compound is not water-soluble. Adjust the pH and precipitate mercury as mercury sulfide. Wash and dry the precipitate and return to the suppliers.

392 Mesitylene



Synonym: 1,3,5-Trimethylbenzene.

Uses: Dyes, pigments, manufacture of medical and industrial drugs.

MCR

MERCURY

[illegible]	Liquid	Silver	Odorless
	Sinks in water		

AVOID CONTACT WITH LIQUID. Keep people away.
Stop discharge if possible.
Isolate and remove discharged material.
Notify local health and pollution control agencies.

Fire	Not flammable
Exposure	CALL FOR MEDICAL AID. LIQUID Effects of exposure may be delayed
Water Pollution	HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

1. RESPONSE TO DISCHARGE

See Response Methods Handbook, CG-446-4

Should be removed
Chemical and physical treatment

2. LABELS

No hazard label required by Code of Federal Regulations

3. CHEMICAL DESIGNATIONS

3.1 **Synonyms:** Quicksilver
3.2 **Coast Guard Compatibility Classification:** Not applicable
3.3 **Chemical Formula:** Hg
3.4 **IMCO United Nations Numerical Designation:** Not listed

4. OBSERVABLE CHARACTERISTICS

4.1 **Physical State (as shipped):** Liquid
4.2 **Color:** Silvery
4.3 **Odor:** None

5. HEALTH HAZARDS

5.1 **Personal Protective Equipment:** Avoid contact of liquid with skin. For vapor use chemical cartridge [illegible] respirator.
5.2 **Symptoms Following Exposure:** No immediate symptoms. As poisoning becomes established, slight muscular tremor, loss of appetite, nausea, and diarrhea are observed. Psychic, kidney and cardiovascular disturbances may occur.
5.3 **Treatment for Exposure:** Consult a doctor.
5.4 **Toxicity by Inhalation (Threshold Limit Value):** [illegible]
5.5 **Short-Term Inhalation Limits:** Data not available
5.6 **Toxicity by Ingestion:** No immediate toxicity
5.7 **Late Toxicity:** Development of mercury poisoning
5.8 **Vapor (Gas) Irritant Characteristics:** None
5.9 **Liquid or Solid Irritant Characteristics:** None
5.10 **Odor Threshold:** Not pertinent

6. FIRE HAZARDS

6.1 **Flash Point:** Not flammable
6.2 **Flammable Limits in Air:** [illegible]
6.3 **Fire Extinguishing Agents:** [illegible]
6.4 **Fire Extinguishing Agents Not to be Used:** Not pertinent
6.5 **Special Hazards of Combustion Products:** Not pertinent
6.6 **Behavior in Fire:** Not pertinent
6.7 **Ignition Temperature:** Not flammable
6.8 **Electrical Hazard:** Not pertinent
6.9 **Burning Rate:** Not flammable

7. CHEMICAL REACTIVITY

7.1 **Reactivity with Water:** No reaction
7.2 **Reactivity with Common Materials:** No reaction
7.3 **Stability During Transport:** Stable
7.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent
7.5 **Polymerization:** Not pertinent
7.6 **Inhibitor of Polymerization:** Not pertinent

8. WATER POLLUTION

8.1 **Aquatic Toxicity:** [illegible]
8.2 **Waterfowl Toxicity:** [illegible]
8.3 **Biological Oxygen Demand (BOD):** None
8.4 **Food Chain Concentration Potential:** [illegible]

9. SELECTED MANUFACTURERS

1. [illegible]
Brooklyn, N.Y. [illegible]
2. [illegible]
Philipp Bros. Division
299 Park Ave.
New York, N.Y. [illegible]
3. NL Industries
[illegible]
Chicago, Ill. [illegible]

10. SHIPPING INFORMATION

10.1 **Grades or Purity:** [illegible]
10.2 **Storage Temperature:** [illegible]
10.3 **Inert Atmosphere:** [illegible]
10.4 **Venting:** Open

11. HAZARD ASSESSMENT CODE

(See Hazard Assessment Handbook, CG-446-3)

A-X

12. HAZARD CLASSIFICATIONS

12.1 **Code of Federal Regulations:** ORM-B
12.2 **NAS Hazard Rating for Bulk Water Transportation:** Not listed
12.3 **NFPA Hazard Classifications:** Not listed

13. PHYSICAL AND CHEMICAL PROPERTIES

13.1 **Physical State at 15°C and 1 atm:** [illegible]
13.2 **Molecular Weight:** [illegible]
13.3 **Boiling Point at 1 atm:** [illegible]
13.4 **Freezing Point:** [illegible]
13.5 **Critical Temperature:** 2664 F = 1462 [illegible]
13.6 **Critical Pressure:** [illegible]
13.7 **Specific Gravity:** [illegible]
13.8 **Liquid Surface Tension:** [illegible]
13.9 **Liquid-Water Interfacial Tension:** [illegible]
13.10 **Vapor (Gas) Specific Gravity:** Not pertinent
13.11 **Ratio of Specific Heats of Vapor (Gas):** [illegible]
13.12 **Latent Heat of Vaporization:** Not pertinent
13.13 **Heat of Combustion:** [illegible]
13.14 **Heat of Decomposition:** [illegible]
13.15 **Heat of Solution:** [illegible]
13.16 **Heat of Polymerization:** [illegible]

[illegible]

NOTES

ROUS HYPOPHOSPHATE. $Hg_4P_2O_6$, mw:

HIGH. See mercury compounds. Unstable. ip explosively. [19]

ROUS IODATE. Yellowish crystals. $Hg_2(IO_3)_2$, 5, 6, mp: decomp.

See mercury compounds, inorganic, and ites.

ROUS IODIDE. Yellow tetragonal crystals or s powder. HgI, mw: 327.50, mp: sublimes @ decomp @ 290°, d: 7.70.

tox data: Oral LD_{50} (mouse) = 110 mg kg; (mouse) = 50 mg kg. [3]

= HIGH via oral and ip routes. See mercury ipounds, inorganic, and iodides.

ROUS MONOHYDROGEN-*o*-ARSENATE. ed crystals. Hg_2HAsO_4, mw: 541.14.

HIGH. See arsenic compounds and mercury ipounds, inorganic.

ROUS NITRATE. Short, colorless, efflores- rystals. $Hg_2(NO_3)_2 \cdot 2H_2O$, mw: 561.26, mp: 4.79 @ 4°.

tox data: Oral LD_{50} (rat) = 297 mg kg; oral (mouse) = 388 mg kg; ipLD_{50} (mouse) = 5 kg. [3]

= HIGH via oral and ip routes. See mercury pounds, inorganic, and nitrates. Violent reac- with C, P. [19]

ROUS NITRATE, AMMONIATED. Syn: *precipitate*. Black powder, $Hg_2ONH_2 \cdot$ mw: 958.4.

See mercury compounds, inorganic, and

ROUS NITRITE. Yellow crystals. $Hg_2(NO_2)_2$, 3.24, mp: decomp @ 100°, d: 7.33.

HIGH. See mercury compounds, inorganic, itrites.

ROUS OXALATE. White crystals. $Hg_2C_2O_4$, 24.

See oxalates and mercury compounds,

ROUS OXIDE, BLACK. Black to grayish- wder. Hg_2O, mw: 417.22, mp: decomp @

HIGH. See mercury compounds, inorganic. ard. Mod, by chemical reaction; an oxidizer. ently with H_2O_2, K, Na, S, BaO + air). [19]

Hazard: Dangerous; when heated to decomp. ghly toxic fumes of mercury; can react with g materials.

MERCUROUS PHOSPHATE. Heavy white powder. Hg_3PO_4, mw: 696.85.

THR = See mercury compounds, inorganic.

MERCUROUS SULFATE. White crystalline powder. Hg_2SO_4, mw: 497.28, mp: decomp, d: 7.56.

THR = See mercury compounds, inorganic, and sulfates.

MERCUROUS SULFIDE. Black crystals. Hg_2S, mw: 433.24, mp: decomp.

THR = See mercury compounds, inorganic, and sulfides.

MERCUROUS TARTRATE. Yellowish-white crystalline powder. $Hg_2C_4H_4O_6$, mw: 549.29.

THR = See mercury compounds, organic.

MERCURY. Silvery liquid, metallic element. Hg, atwt: 200.7, mp: −38.89°, bp: 356.9°, d: 13.546, vap. press: 1 mm @ 126.2°.

Acute tox data: Oral LD_{LO} (human) = 1429 mg kg; inhal TC_{LO} (human) = 0.17 mg m^3 for 40 yrs ⟶ CNS problems; ivTD_{LO} (human) = 29 mg kg; ⟶ GI symptoms. [3]

THR = HIGH to CNS, GI tract. See mercury compounds. An exper neo. [3] Reacts violently with acetylene, NH_3, BPI_2, Cl_2, ClO_2, CH_3N_3, Na_2C_2, nitromethane (butyne diol + acid). [19]

Radiation Hazard: For permissible levels, see Section 5, Table 5A.5. Artificial isotope ^{203}Hg, $T_{\frac{1}{2}}$ = 47d. Decays to stable ^{203}Tl by emitting β's of 0.21 MeV. Emits γ's of 0.28 MeV.

Disaster Hazard: Dangerous; when heated emits highly toxic fumes.

MERCURY ACETAMIDE. White powder. CH_3CONHg, mw: 257.7.

THR = HIGH. See mercury compounds, organic.

MERCURY ACETATE. See mercurous acetate or mercuric acetate.

MERCURY ALANINE. See mercury-α-aminopropionate.

MERCURY-*p*-AMINOPHENOL ARSENATE. See mercury atoxylate.

MERCURY-α-AMINOPROPIONATE. Syn: *mercury alanine*. White crystals, water-sol. $Hg[CH_3CH(NH_2)COO]_2$, mw: 374.8.

THR = HIGH. See mercury compounds, organic.

MERCURY, AMMONIATED. See mercuric ammonium chloride.

MERCURY ANTIMONY SULFIDE. Gray-black powder. Mixture of equal parts of black mercury sulfide and gray antimony sulfide.

THR = See mercury compounds, antimony and sulfides.

Job safety and health protection

The Occupational Safety and Health Act of 1970 provides job safety and health protection for workers through the promotion of safe and healthful working conditions throughout the Nation. Requirements of the Act include the following:

Employers: Each employer shall furnish to each of his employees employment and a place of employment free from recognized hazards that are causing or are likely to cause death or serious harm to his employees; and shall comply with occupational safety and health standards issued under the Act.

Employees: Each employee shall comply with all occupational safety and health standards, rules, regulations and orders issued under the Act that apply to his own actions and conduct on the job.

The Occupational Safety and Health Administration (OSHA) of the Department of Labor has the primary responsibility for administering the Act. OSHA issues occupational safety and health standards, and its Compliance Safety and Health Officers conduct jobsite inspections to ensure compliance with the Act.

Inspection: The Act requires that a representative of the employer and a representative authorized by the employees be given an opportunity to accompany the OSHA inspector for the purpose of aiding the inspection.

Where there is no authorized employee representative, the OSHA Compliance Officer must consult with a reasonable number of employees concerning safety and health conditions in the workplace.

Complaint: Employees or their representatives have the right to file a complaint with the nearest OSHA office requesting an inspection if they believe unsafe or unhealthful conditions exist in their workplace. OSHA will withhold, on request, names of employees complaining.

The Act provides that employees may not be discharged or discriminated against in any way for filing safety and health complaints or otherwise exercising their rights under the Act.

An employee who believes he has been discriminated against may file a complaint with the nearest OSHA office within 30 days of the alleged discrimination.

[illegible] the Act, a citation alleging such violations will be issued to the employer. Each citation will specify a time period within which the alleged violation must be corrected.

The OSHA citation must be prominently displayed at or near the place of alleged violation for three days, or until it is corrected, whichever is later, to warn employees of dangers that may exist there.

Proposed Penalty: The Act provides for mandatory penalties against employers of up to $1,000 for each serious violation and for optional penalties of up to $1,000 for each nonserious violation. Penalties of up to $1,000 per day may be proposed for failure to correct violations within the proposed time period. Also, any employer who willfully or repeatedly violates the Act may be assessed penalties of up to $10,000 for each such violation.

Criminal penalties are also provided for in the Act. Any willful violation resulting in death of an employee, upon conviction, is punishable by a fine of not more than $10,000 or by imprisonment for not more than six months, or by both. Conviction of an employer after a first conviction doubles these maximum penalties.

Voluntary Activity: While providing penalties for violations, the Act also encourages efforts by labor and management, before an OSHA inspection, to reduce injuries and illnesses arising out of employment.

The Department of Labor encourages employers and employees to reduce workplace hazards voluntarily and to develop and improve safety and health programs in all workplaces and industries.

Such cooperative action would initially focus on the identification and elimination of hazards that could cause death, injury, or illness to employees and supervisors. There are many public and private organizations that can provide information and assistance in this effort, if requested.

More Information: Additional information and copies of the Act, specific OSHA safety and health standards, and other applicable regulations may be obtained from your employer or from the nearest OSHA Regional Office in the following locations:

Atlanta, Georgia
Boston, Massachusetts
Chicago, Illinois
Dallas, Texas
Denver, Colorado
Kansas City, Missouri
New York, New York
Philadelphia, Pennsylvania
San Francisco, California
Seattle, Washington

Telephone numbers for these offices, and additional Area Office locations, are listed in the telephone directory under the United States Department of Labor in the United States Government listing.

Washington, D.C.
1981
OSHA 2203

Raymond J. Donovan
Secretary of Labor

U.S. Department of Labor
Occupational Safety and Health Administration

GPO [illegible]

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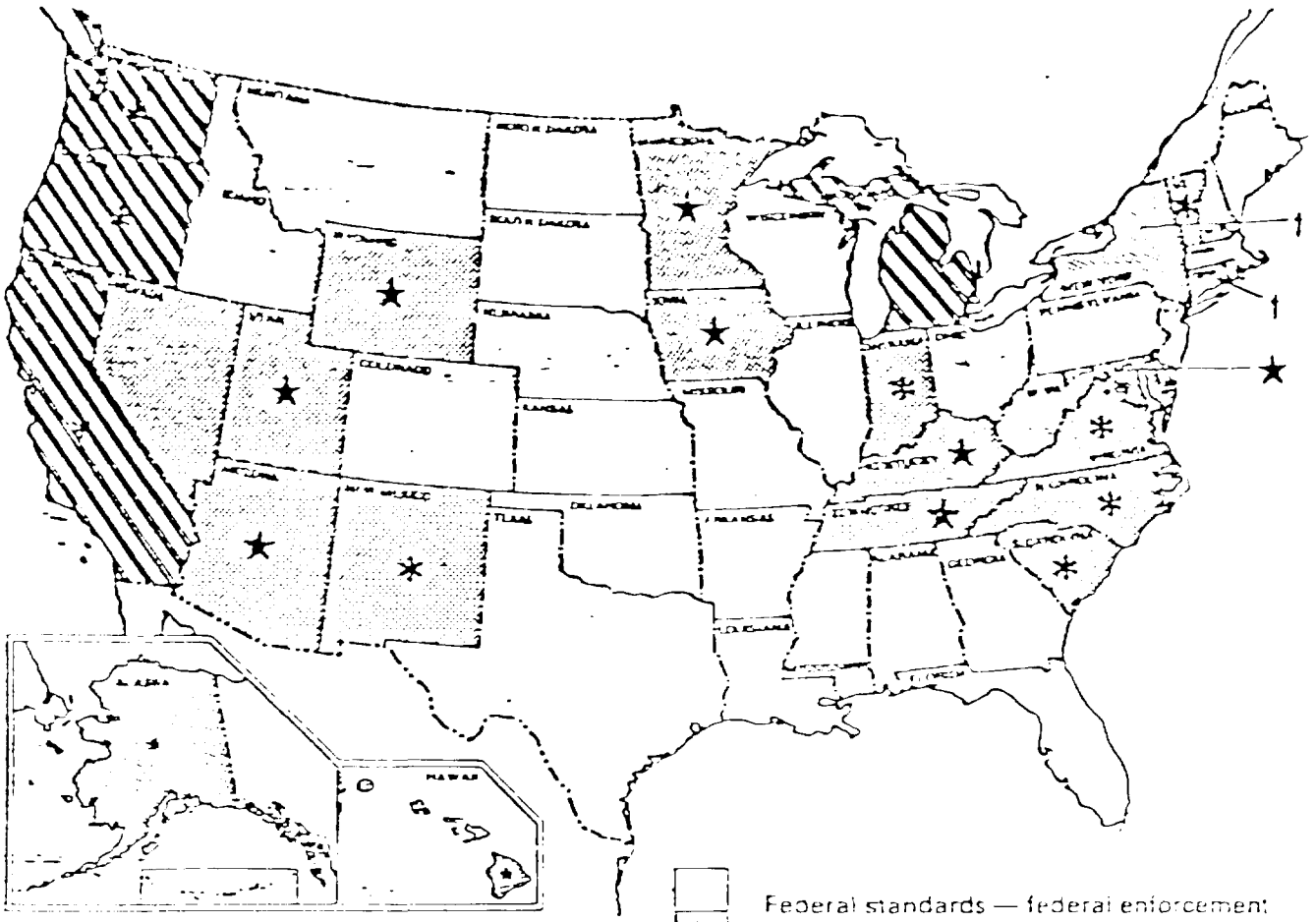

FEDERAL OSHA AND STATE PLANS JURISDICTIONS

The above map represents the current status of jurisdictional areas for applicable OSHA or state regulations, inspections, and enforcement. At present, only four states (Washington, Oregon, California, and Michigan) have approved plans which differ significantly from federal standards.

All of the states are monitored by OSHA to determine state plan qualification. State plans must be judged "at least as effective as" the federal program in order to be approved. A state plan may receive OSHA approval by demonstrating it will meet all requirements within three years. After completing these steps and operating its program at a fully effective level for at least one year, federal enforcement will end in the areas covered by the state plan. OSHA then continues its monitoring to determine when the plan should be certified and when it should receive final approval.

†Connecticut and New York — state plan covers employees of state only; all other employers are under federal OSHA jurisdiction.

ATTACHMENT E

Polrep

POLREP #1

Peachtree Industrial Mercury Spill
Norcross, Georgia
Emergency Response

Attn: George Moein and Tim Fields

I Situation (1400 hours, 12/31/87)

A. Personnel on scene:
EPA-1 Georgia EPD-1 TAT-1 ERCS-4
Gwinnett County Hazardous Material Response Team-2

B. Weather: Sunny, high in 50's, low in upper 20's

II Actions Taken

On 12/29/87 at 1530 hours EPA, TAT, Georgia EPD, and Gwinnett County Hazardous Materials Response Team responded to a mercury spill at 6767 Peachtree Industrial Boulevard, Gwinnett County, Norcross Georgia. Approximately one pint of mercury was spilled behind several businesses at the 6767 address. The mercury was spilled from a dumpster onto the asphalt parking lot in the rear of the building.

After the initail site investigation OSC Walsh determined the ERCS contractor was needed to clean up the spill. The ERCS contractor mobilizied a vacuum unit to the site to collect the mercury from the parking lot. An 8 oz jar of mercury weighing approximately 12-14 lbs was collected from the parking lot. The parking area was then sealed with a sealer. The dumpster that the mercury was suspected of spilling from was then sealed and guarded all night.

On 12/30/87 ERCS decontaminated the debris in the dumpster. After completing this process, the dumpster was then vacuumed clean. The mercury from the decontamination process was collected and stored in sample jars. In addition to this collected mercury, 35 lbs of mercury still in the orginal shipping containers was found in the dumpster. The mercury was in plastic coated bottles. Seven full bottles weighing approximately 5 lbs each and three empty bottles were recovered from the dumpster. All pertinent information from the packaging and bottles was photographed and recorded. Disposal of the mercury is pending disposal options.

Total Superfund monies spent is approximately $8,000.

POLREP #2

Peachtree Industrial Mercury Spill
Norcross, Georgia
Emergency Response

Attn: Bruce Kulpan, Bob Jordan and Tim Fields

I Situation (1430 hours, 03/28/88)

II Actions Taken

On 12/29/87 at 1530 hours EPA, TAT, Georgia EPD, and Gwinnett County Hazardous Materials Response Team responded to a mercury spill at 6767 Peachtree Industrial Boulevard, Gwinnett County, Norcross Georgia. Approximately one pint of mercury was spilled behind several businesses at the 6767 address. The mercury was spilled from a dumpster onto the asphalt parking lot in the rear of the building.

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On 02/24/88 ERCS sold the recovered mercury to D.F. Goldsmith in Evanston, Illinois for recycling. The money from the sale was credited to the EPA by the ERCS contractor. A criminal investigation is currently ongoing.

Total Superfund monies spent is approximately $10,000.

ATTACHMENT F

Media Coverage

Mercury is found leaking from dumpster

Gwinnett Bureau

Between 35 and 40 pounds of mercury was discovered leaking from a dumpster behind a Gwinnett County business, and it took nearly 24 hours and equipment shipped in by federal officials to clean it up, officials said Wednesday.

Lt. Henry Argo, Gwinnett fire department spokesman, said the spill, behind Jennifer Glass Works, 6767 Peachtree Industrial Blvd., was reported about 2:03 p.m. Tuesday.

Firefighters, who originally thought only about a pint of mercury was involved, cordoned off the area. The federal Environmental Protection Agency (EPA) flew in a mercury vacuum and testing equipment to clean up the spill, Argo said.

The spill was cleaned up by 1:30 p.m. Wednesday, Argo said. Mercury is toxic if eaten, inhaled or absorbed through the skin and can only be disposed of by following EPA guidelines.